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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,813	11/28/2000	Yasuharu Asano	450100-02862	6411

20999 7590 04/22/2005

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EXAMINER	
JACKSON, JAKIEDA R	

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/723,813	ASANO ET AL.	
	Examiner	Art Unit	
	Jakieda R Jackson	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5 and 8-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5 and 8-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In response to the Office Action mailed September 1, 2004, applicant submitted an amendment filed on December 3, 2004, in which the applicant requested reexamination and reconsideration with respect to amended **claims 1, 10 and 11**.

Response to Arguments

2. Applicants argue that Henton does not disclose "extracting" pitch information from an input voice, but rather uses a pitch parameter to add vocal emotion to a synthesized voice. In other words, applicant argues that Henton discloses the use of pitch information for voice synthesis, rather than the extraction of pitch information during voice processing as required in the present invention.

Applicant's arguments, see page 6-7, filed December 3, 2005, with respect to the rejection(s)of claim(s) 1 and 10-11 under U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Fukui. Fukui teaches that the robots emotions are geared to the pitch and the pitch is indicative of the emotion. For example, Fukui extracts the emotion from the users input data, such as texts, images and speech and predicts the next user demand (column 45, lines 26-34). Also, Fukui teaches an intention function analysis (figs. 99-102), which analyzes the emotions with reference to the users data in addition to the extraction of intention. Different emotions, such as satisfaction, joy, interest, dissatisfaction, confusion, and anger and adverbs, adjectives, adjective adverbs, and interjections, which express these types of

emotions are registered in the dictionary (column 48, lines 7-14). The "realization" method is compared to a user's voice frequency (pitch) with reference frequencies representing boredom, anger, and joy (column 49, lines 15-18). *A speed pitch represents the speed an intonation of conversation and the speed utterances to estimate the user's emotions (column 49, lines 25-28). Fukui teaches that the speech input speech unit (figure 108) coverts the speech into digital data and pitch extraction is performed (column 54, lines 40-52 with figure 108-109). The input speech is understood, and the intentions, emotions, and status of the user can be understood, thereby realizing a more appropriate interactive operation (column 56, lines 14-17).*

Applicants also argue that Henton fails to disclose any linking of models, much less in "a mutually simulating manner". However, the examiner disagrees. Table 2 (column 10, lines 1-67) of Henton shows how emotion and instinct models are linked in a mutually simulating manner (i.e. how one effects another).

Applicants argue that Edatsune does not disclose "a reliability" value, but simply states the invention "produces sounds or actions in response to the recognition result".

With regards to the previously mentioned arguments, applicants arguments are moot in view of new grounds of rejection.

Claim Objections

3. As mentioned numerous times before in previous office actions, the specification and the claims are objected to because the term "voice recognition" is misused for what nowadays is called --speech recognition-- in the speech signal processing art. While "voice recognition" and "speech recognition" were both once used interchangeably to refer to spoken word recognition, nowadays these two terms are distinguished. The term "voice recognition" now denotes identification of who is doing the speaking (class 704/246), while "speech recognition" (or word recognition") denotes identification of what is being said (class 704/251). So, appropriate correction to the proper terms of art is required (e.g. claims 1 and 10-11 and throughout the specification).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1, 3-5 and 8-11** are rejected under 35 U.S.C. 102(e) as being anticipated by Fukui et al. (USPN 5,918,222), hereinafter referenced as Fukui.

Regarding **claims 1 and 10-11**, Fukui discloses voice processing device, method and recording medium built into a robot (column 20, lines 22-27), said voice processing device comprising:

voice processing means for processing a voice input (speech recognition) including extracting control pitch information (indicative in emotion) or phonemics information (phonemes; column 55, lines 13-15 and lines 24-45 with column 45, lines 26-34); and

control means for controlling voice processing by said voice processing means, based on a state of said robot; wherein the state is determined by an action (accesses the information associated with recent actions; column 29, lines 9-18 with change topic; column 52, lines 16-64), an emotion state (emotion; column 52, lines 16-64 with column

48, lines 10-14), and an instinct state of the robot (predicts the next user demand; column 45, lines 26-34);

wherein said emotion and instinct states are determined on the basis of values corresponding to a plurality of states of an emotion model and an instinct model, respectively (extracts emotion and can predict the next user demand; column 45, lines 26-34 with column 48, lines 7-14); wherein the value corresponding to each state within the emotion model and within the instinct model are linked in a mutually stimulating manner (extracts emotion and can predict the next user demand; column 45, lines 26-34) and changed based on said control pitch information (pitch) or said phonemics information (phonemes; column 55, lines 13-45);

wherein said voice processing means comprises speech recognizing means for recognizing the speech input (column 56, lines 14-17 with column 45,lines 26-34);

and wherein said robot takes actions (change topic) corresponding to a reliability of the speech recognition results output from said speech recognizing means, or the emotion state (emotion check) of said robot is chanced based on said reliability (column 52, lines 16-67 with column 56, lines 25-58 and column 57, lines 1-11).

Regarding **claim 3**, Fukui discloses the voice processing device, method and recording medium wherein said voice processing means comprises voice synthesizing means for performing voice synthesizing processing and outputting synthesized sound (figure 109 with column 53, line 64 – column 54, line 7);

and wherein said control means control the voice synthesizing processing by said voice synthesizing means, based on the state of said robot (figures 108 and 109).

Regarding **claim 4**, Fukui discloses the voice processing device, method and recording medium wherein said control means control phonemics information (phonemes) and pitch information (pitch) output by said voice synthesizing means (55, lines 13-45 with column 53, line 64 – column 54, line 17 and lines 40-53).

Regarding **claim 5**, Fukui discloses the voice processing device, method and recording medium wherein said control means control the speech speed (speech speed; column 49, lines 25-28) or volume of synthesized sound output by said voice synthesizing means.

Regarding **claim 8**, Fukui discloses the voice processing device, method and recording medium wherein said control means recognizes the action which said robot is taking, and controls voice processing by said voice processing means based on the load regarding that action (change in topic; column 52, lines 16-30 with column 29, lines 9-18).

Regarding **claim 9**, Fukui discloses the voice processing device, method and recording medium wherein said robot takes actions corresponding to resources which can be appropriated to voice processing by said voice processing means (change in topic; column 52, lines 16-30 with column 29, lines 9-18).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jakieda R Jackson whose telephone number is 571.272.7619. The examiner can normally be reached on Monday through Friday from 7:30 a.m. to 5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on 571.272.7593. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JRJ
April 14, 2005

DAVID L. OMETZ
PRIMARY EXAMINER